APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/510,190	02/22/2000	Wataru Ito	2091-0208P	2136

7590 06/23/2004	EXAMINER
Birch Stewart Kolasch & Birch LLP	SUKHAPHADHANA, CHRISTOPHER T
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ART UNIT	PAPER NUMBER
2625	16

Falls Church, VA 22040-0747

DATE MAILED: 06/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *19 May 2004*.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-14* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-11* is/are rejected.

7) ☒ Claim(s) *12-14* is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *21 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

        1. ☒ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____.

        3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   The Amendment filed 19 May 2004 has been entered in full.

Preliminary Matters

2.   Applicant's submission of the correctness of the dependency of claim 9 from claim 11 in

the first paragraph on page 9 of the Amendment filed 19 May 2004 is noted. Claim 9 will be

examined based on a dependency from claim 11.

Response to Arguments

3.   Applicant's arguments regarding the claim objection of **claim 9** on page 8 of the

Amendment filed 19 May 2004 have been fully considered but they are not persuasive.

Applicant argues in substance that:

a.   "Flesh area" further limits the "face area" of claim 11 because a face area

generally has both flesh and non-flesh area.

Examiner agrees and disagrees. While the Examiner agrees that a face area

contains both flesh and non-flesh areas, Examiner disagrees that this feature is properly

presented in the claim. Claim 9 selects "a flesh area of the *figure*" (emphasis added) and

not a flesh area of a face area (as argued). A figure in an image can have multiple flesh

areas outside of a face area, e.g. neck, hands, feet, arms, legs, torso, etc. Consider

replacing "flesh area of the figure in the image" with --flesh area of the face area of the

figure in the image--. The original claim objection is maintained, and a new claim

objection to claim 9 is made below based on Applicant's amendments.

4.   Applicant's arguments, see the last paragraph on page 9 of the Amendment filed 19 May

2004, with respect to the rejections of **claim 9** under 35 USC 112 have been fully considered and

are persuasive. The rejection under 35 USC 112 of claim 9 has been withdrawn.

5.   Applicant's arguments regarding the rejection of **claim 1** under 35 USC 102 in the first

full paragraph on page 12 of the Amendment filed 19 May 2004 have been fully considered but

they are not persuasive.

Applicant argues in substance that:

b.   Inoue fails to disclose the adjustment of a density or color of a selected image

area to compensate for the effect of the density or color of a surrounding image area

on the visual perception of the selected area because Inoue performs a removal of an

image area, as opposed to a selection of an image area.

Examiner disagrees. With reference to Fig 5 and col 8, lines 15-26, Inoue

discloses a process where an operator repeatedly selects different background areas 104,

105, 106 with designating means 12 to form the two images presented at the bottom of

Fig 4. By selecting the background areas that are not the characteristic figure 120, the

operator effectively "selects" the characteristic figure (bottom right of Fig 4).

6.   The Examiner's arguments presented for claim 1 are applicable in response to

Applicant's arguments for **claims 2-14**, which are similar to claim 1.

Claim Objections

7.   **Claim 9** is objected to under 37 CFR 1.75(c), as being of improper dependent form for

failing to further limit the subject matter of a previous claim. Applicant is required to cancel the

claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the

claim(s) in independent form. Consider replacing "flesh area of the figure in the image" with --

flesh area of the face area of the figure in the image--.

8.   **Claim 9** is objected to because of the following informalities: Consider replacing "the

extracted image area" on line 4 of the claim with --the selected image area-- to maintain

consistency with Applicant's other claim amendments. Appropriate correction is required.

Claim Rejections - 35 USC § 102

9.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10.   **Claims 1-4 and 10** are rejected under 35 U.S.C. 102(b) as being anticipated by Inoue

(U.S. Patent 5,524,069, previously cited).

11.   In regards to **claim 1**, Inoue discloses an image processing method (Fig 4) for carrying

out image processing on an image, the image processing method comprising the steps of:

selecting an area in the image (col 6, lines 25, "each intensity component"); and adjusting:

density (col 7, lines 14-16) of the image at the selected image area based on density information

of an area in the image surrounding the selected image area so as to compensate for an effect of

density of the surrounding image area on visual perception of the density of the selected image

area; and color (col 6, lines 20-24) of the image at the selected image area based on color

information of the surrounding image area so as to compensate for an effect of color of the

surrounding image area on visual perception of the color of the selected image area.

With reference to Fig 5 and col 8, lines 15-26, Inoue discloses a process where an

operator repeatedly selects different background areas 104, 105, 106 with designating means 12

to form the two images presented at the bottom of Fig 4. By selecting the background areas that

are not the characteristic figure 120, the operator effectively "selects" the characteristic figure

(bottom right of Fig 4).

12.   In regards to **claims 2-4 and 10**, all the elements set forth in these claims have been

addressed in the argument of claim 1.

Claim Rejections - 35 USC § 103

13.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

14.   **Claims 5-8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue (U.S.

Patent 5,524,069, "Inoue") as applied to claim 1 above, in combination with Gonzalez et al

(*Digital Image Processing*, 1993, "Gonzalez").

15.   In regards to **claim 5**, Inoue does not expressly disclose the method further comprising:

designating the area surrounding the selected image area as a concentric area in the image

excluding the selected image area.

However, Inoue does disclose low pass filtering (col 6, lines 20-24, and col 7, lines 14-

16). Inoue does not expressly disclose the specific method of low pass filtering.

Gonzalez teaches a means of low pass filtering (p 192, Fig 4.21(b)) that designates an

area surrounding the extracted image area as a concentric area in the image excluding the

extracted image area.

It would have been obvious to one of ordinary skill in the art at the time of the invention

to incorporate Gonzalez's filtering into Inoue's method because it provides an enabling method

to perform Inoue's low pass filtering.

16.   In regards to **claim 6**, Inoue does not expressly disclose the method further comprising:

determining the surrounding image area such that the surrounding image area has a radius of 3

times a radius of the selected image area.

However, Inoue does disclose low pass filtering (col 6, lines 20-24, and col 7, lines 14-

16). Inoue does not expressly disclose the specific method of low pass filtering.

Gonzalez teaches a means of low pass filtering (p 192, Fig 4.21(b)) that determines the

surrounding image area such that the surrounding image area has a radius of 3 times a radius of

the extracted image area.

It would have been obvious to one of ordinary skill in the art at the time of the invention

to incorporate Gonzalez's filtering into Inoue's method because it provides an enabling method

to perform Inoue's low pass filtering.

17.   In regards to **claim 7**, Inoue does not expressly disclose the method further comprising:

dividing the surrounding image area into sub areas; and calculating an average pixel density of

each sub area.

However, Inoue does disclose low pass filtering (col 6, lines 20-24, and col 7, lines 14-

16). Inoue does not expressly disclose the specific method of low pass filtering.

Gonzalez teaches a means of low pass filtering (p 192, Fig 4.21(b)) that divides the

surrounding image area into sub areas (each of the 24 other pixels) and calculates an average

pixel density of each sub area (since the result of the lpf is the weighted sum of the surrounding

24 pixels, each of the densities of the 24 other pixels are inherently calculated).

It would have been obvious to one of ordinary skill in the art at the time of the invention

to incorporate Gonzalez's filtering into Inoue's method because it provides an enabling method

to perform Inoue's low pass filtering.

18.   In regards to **claim 8**, Inoue does not expressly disclose the method further comprising:

calculating density and/or color information of the surrounding image area.

However, Inoue does disclose low pass filtering (col 6, lines 20-24, and col 7, lines 14-

16). Inoue does not expressly disclose the specific method of low pass filtering.

Gonzalez teaches a means of low pass filtering (p 192, Fig 4.21(b)) that calculates density

and/or color information of the surrounding image area.

It would have been obvious to one of ordinary skill in the art at the time of the invention

to incorporate Gonzalez's filtering into Inoue's method because it provides an enabling method

to perform Inoue's low pass filtering.

19.   **Claims 9 and 11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue

(U.S. Patent 5,524,069, "Inoue") as applied to claim 1 above, in combination with Chen (U.S.

Patent 6,141,442, previously cited, "Chen").

20.   In regards to **claim 9**, Inoue does not expressly disclose the extracting step extracting a

flesh area in the image as the extracted image area and the adjusting step adjusting at least one of

density and color of the flesh area.

     However, Inoue does disclose the extracting step and adjusting step as set forth in the

argument of claim 1 above. Furthermore, Inoue discloses these steps as part of a method of

extracting a characteristic figure from a color picture (Fig 4 and abstract).

     Chen teaches

     It would have been obvious to one of ordinary skill in the art at the time of the invention

to incorporate Inoue's method to extract and adjust Chen's flesh area because Chen discloses his

image segmenter 302 utilizes any well-known image segmentation techniques (Chen, col 7, lines

22-25) where Inoue's method has an excellent extraction property when an attribute of the pixels

on the characteristic figure is not uniform or when the background picture is unknown (Inoue,

col 1, lines 59-64).

21.   In regards to **claim 11**, Inoue does not expressly disclose the extracting step extracting a

face area of a figure in the image as the extracted image area.

     However, Inoue does disclose the extracting step as set forth in the argument of claim 1

above. Furthermore, Inoue discloses this step as part of a method of extracting a characteristic

figure from a color picture (Fig 4 and abstract).

Chen teaches extracting a face area of a figure (ref 1501 and 1502, Fig 15 and col 12, lines 62-66) as an extracted image area.

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Inoue's method to extract Chen's flesh area because Chen discloses his image segmenter 302 utilizes any well-known image segmentation techniques (Chen, col 7, lines 22-25) where Inoue's method has an excellent extraction property when an attribute of the pixels on the characteristic figure is not uniform or when the background picture is unknown (Inoue, col 1, lines 59-64).

22.   In regards to **claim 9**, Chen further discloses selecting a flesh area (ref 1501 and 1502, Fig 15 and col 12, lines 62-66) as the selected image area and adjusting (Fig 16 and 17, and col 15, lines 4-14) at least one of density and color of the image at the flesh area.

Allowable Subject Matter

23.   **Claims 12-14** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

24.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

25.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Christopher T. Sukhaphadhana whose telephone number is (703)

306-4148. The examiner can normally be reached on 9a-5p M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Bhavesh M. Mehta can be reached on (703) 308-5246. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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